

REMARKS

1. In the Official Action dated 01 December 2003 claims 24, 25, 28-35, 39 and 41 were withdrawn from consideration as having no allowable generic or linking claim, being drawn to non-elected species C and E.
2. Claims 22, 23, 26, 27, 36-38 and 40 were rejected, with claims 22, 23, 27 and 37 listed as being anticipated by Rawls et al. (5,920,072).

Arguments vs. Rejections -Claim 22

3. The Rawls et al. exerciser shows the addition of heel-toe pivoting motion capability to an otherwise typical "strider", having the same limitations outlined in applicant's Background (p. 2, l. 33+) and in applicant's second supplemental amendment of 01 August 2003 (p.5, l.9+) defense vs. Rodgers (5,989,163). These limitations regarding the principal elements of applicant's claim 22: (1) realistic, normal walking, running strides, (2) automatically variable strides rearward from a constant forward step-down position and (3) return of each pedal to said forward step-down position at end of stride independently of stride length, are at least two-fold:

3.1. First, quoting from the Rawls et al. Abstract (l. 5+): "A swing control member interconnects the swing arms to provide a dependent action with the rearward movement of one pedal causing the forward movement of the other....". Also, the same is shown in Fig. 10 and others and described at Col. 3, l. 7+, Col.14, l. 19+ & especially l. 63+ and in claim 1, Col. 20, l. 14+ . Thus, a pedal cannot return forward independently of stride length, especially independently of any succeeding stride on the opposite pedal. The Rawls device has independent pivoting or upward and downward movements of the pedals relative to forward-rearward swinging movement, which is, in fact, opposite to at least some versions of applicant's invention (claims 23 & 25) wherein downward force or step-down on the forward

pedal causes or is dependently connected with forward return of the opposite pedal. In effect, it is opposite to the action of all species of applicant's invention, since human "two leg walking logic" dictates that lifting or returning forward of one foot equates with step-down on the other, and either or both actions equate with "end of stride". Rawls' independence of pivoting of the pedals relative to forward-rearward motion means it has no bearing on return of the pedals forward to a constant step-down position, or any forward motion at all. Rawls' up-down pivoting motion allows angular foot or "stepping" motion independent of "striding" motion with real stepping alone possible only at the bottom of the arc of travel or mid-position as seen in Figs. 9 and 16 (Also, see 3.2 below). The dependence of forward motion of one pedal on the rearward motion of the other constrains the device to varying stride lengths only while swinging the feet, always essentially equally weighted, in equal and opposite directions, with some heel-toe pivoting motion capability added. It will not allow varying realistic normal walking strides in which there is a real step down as on a treadmill or on applicant's invention (see applicant's Background, p. 2, l. 33+).

3.2 Second, it is not possible to walk normally in even non-varying strides on a pendulum style swing arm device as in Rawls, which is typical of "striders", with or without interconnecting means between the pedals' forward-backward motion. This pendulum arrangement would respond to any attempt to step down on a pedal at a forward position by swinging to the bottom of the arc of travel causing the rear pedal to move equally forward to the same mid-position of travel and there stop with the pedals abreast, not returning the rear pedal to the original forward position. There is no constant forward position at which the user would be able to step down on a returned pedal at end of stride independent of stride of the opposite pedal. Applicant's invention assures the pedal's return to the required constant forward step-down position for continued in-place walking or running independently of stride regardless of any following stride on the opposite pedal. Any succeeding stride can be as short or long as desired, even down to no stride at all; the pedal fully returns.

3.3 In summation, Rawls et al. shows no precedence over applicant's invention as defined in claim 22 and its dependent claims: (1) It does not allow realistic, normal walking or running strides; (2) It maintains no constant forward step-down position to which the pedals return; and (3) There is no pedal return independent of stride.

3.4 Applicant has amended the claim 22 preamble to add: ...realistic, normal walking..... (Background, p. 3, l. 12, 35, & p. 4, l. 17, 30, 39) to more clearly distinguish the action enabled by the invention from the simulated motion of walking or "striding" of striders and added a "whereby" clause for the same reason and to clearly describe the final effect or result.

Discussion: Simulation vs. Real

4. Part of the problem of understanding applicant's invention relative to prior art pedal exercisers such as Rawls et al. may arise from the use or misuse of terms such as "simulation", "stride", "striding" and "motion". Varying degrees of simulation are possible as compared to any normal action or natural artifact. In Rawls, the phrase: "...allows the user to exercise using natural striding and stepping in place motions." (Col. 1, l. 6) would lead one to understand that natural or normal walking type strides were possible. Yet, in the Detailed Description, (Col. 4, l. 59+): "...variety of motions simulating the motion of running, jogging and walking, and the motion of stepping in place, all referred to herein as 'striding' ..." more accurately describes the Rawls apparatus, especially considering that "motion" in itself does not mean the same as the "action" of normal walking, etc. or a duplication of the act of walking (in place). Also, "stride", as a dictionary term has always been associated with walking, while the same term is used in the exerciser field as the swing stroke of the typical "strider" type exerciser as in Rawls et al. This word problem seems to go hand in hand with a "marketing approach" in many prior art disclosures, contributing to a "thought/belief paradigm" holding that normal or natural walking action, especially with automatically variable strides, is not possible on a two pedal device.

Accordingly, the real “action” of walking can only be approximated or “simulated” by a similar “motion” as evidenced by the extensive effort represented by Rawls et al. and the very large number of patents relating to “strider” exercisers showing other incremental changes, but with the same equally weighted, equal and opposite foot swinging motion. This motion is not the equivalent of normal or natural walking or running strides as on a treadmill wherein all or at least most (the returning foot may be ‘dragged’ and walking progress could still be made) of the user’s weight is “stepped down” on the returned foot at the forward position and is maintained on that, now “striding”, foot throughout the stride until it’s end of stride and it becomes again the returning foot as the opposite foot is stepped down at the same forward position to make another weight-carrying, normal walking stride (See also applicant’s Background p.4, l. 1+). The above described “paradigm” is only more evidence of the novelty and non-obviousness of applicant’s invention including the dependent claims.

Arguments vs. Other References

5. Similarly, in Eschenbach (6,361,476 & 6,612,969) (not relied on) a rotating crank controls motion of the pedals for equal and opposite, not independent, travel. The stroke is adjustable, but any change moves the forward end of “stride” as much as the rearward end, requiring the user to move forward or rearward to “step down” with each stride change, meaning the user must keep his feet in contact with the pedals at all times and hold on to handles to move to the new position as the stride is adjusted. There is no constant forward step-down position whereby a user may continuously, normally walk or run in place with varying strides with a pedal appearing in time at that forward position independent of any following stride. The ellipsoid curve of pedal motion as typical of this type exerciser already makes it practically impossible to actually “walk” on the dropping, then rising pedals, all of which puts it in the “simulation of walking” class. Finally, although an “actuator” to motorize the adjustment is shown (6,361,476 , Fig. 4, 61), and a “control system”

(6,612,969 -Col. 5, l. 13) is mentioned as “not shown” (yet claimed in claim 9), there is no automatic variation of the stroke or stride shown wherein the pedals automatically move in varying stride lengths with the user’s feet as in applicant’s invention. Above all, the pedals do not return independently of stride to a constant forward step-down position as in applicant’s invention automatically from varying strides from stride to stride.

Arguments: Claim 41 vs. Claim 22

6. Applicant notes that independent claim 41 was subjected to restriction and/or election and not rejection when the only substantial difference from claim 22 (original) resides in the last line of each (Claim 22: “....independently of stride length.” ; Claim 41: “... at velocities substantially greater than stride velocity.”). Applicant maintains that if means returning the pedals accomplish return velocities greater than stride velocity, then return must also be independent of stride length. Therefore, if claim 41 is allowable, claim 22 must also be. Also, all species can be shown to have pedal return velocities unrestricted by stride velocity, since no stride is necessary while the pedal is returned. Applicant therefore submits that both claims 22 and 41 are allowable and generic to all species including those not elected.

Discussion: Dependent Claims

7. Claim 23 describes one method and means for returning the pedal, step-down energy. Rawls et al. do not anticipate this (Action, Par. 4) as discussed in Par 3 above, there being no relationship in Rawls between step-down and return of the pedal to a forward position. Claim 26, fluid means returning the pedal (Action, Par. 7), can provide a very effective, low moving mass, means for transmitting the energy of step down to return the pedal and a cushioning of the step at the same time. Rawls shows no pedal return in response to step-down. Claim 27, spring return, and Claim 38, external energy sources (Action, Par. 5) are not anticipated in Rawls. The

spring assembly 106 interacts only with downward force or the user's weight on the pedals and has no interaction with forward motion of the pedals. There are no external energy sources applied to returning the pedals in Rawls. The pedals are always returned by the user's feet which are necessarily always essentially equally weighted on the pedals and are pushed back and forth to accomplish the "striding" motion. Claim 36, cushion means integral with the pedals (Action, Par. 6), describes an additional variant of applicant's invention as defined in claim 22 wherein step-down is a continuing action as on a treadmill where improved cushioning is important. The independent claims all further define variations of applicant's invention as outlined in claim 22, adding to the possible means by which such a pedal device may operate effectively in competition with treadmills as a true walking, running exercise machine in a way unanticipated in the prior art.

Conclusion

Applicant submits that the claims define over the prior art per Section 102 and meet the requirements of Section 103 as fully discussed, with apologies for the lengthy response, and respectfully requests reconsideration including reexamination of the non-elected species.

Respectfully submitted,


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Enclosures: Amendments to Abstract

Amendments to Specification

Amendments to Claims